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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,900	02/26/2002	Hisaaki Gyoten	10059-410US(P23466-01)	5187

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EXAMINER	
ALEJANDRO, RAYMOND	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,900	GYOTEN ET AL.	
	Examiner	Art Unit	
	Raymond Alejandro	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This paper is responsive to request for reconsideration dated 04/25/05. The applicants have overcome the 35 USC 103 rejection . Refer to the abovementioned amendment for specific details on applicant's rebuttal arguments. However, the present claims are again rejected over new art as set forth infra and for the reasons of record:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishida et al 6660419.

The applied reference has a common inventor/assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

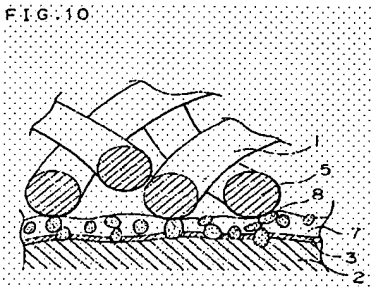
As for claim 1:

Nishida et al disclose a solid polymer electrolyte fuel cell (TITLE) including a solid polymer electrolyte membrane; an anode and a cathode sandwiching the electrolyte membrane (*thus, forming the membrane electrolyte assembly*); an anode side conductive separator plate having a gas flow path for supplying a fuel gas; and a cathode side conductive separator plate having as gas flow path for supplying oxidant gas (CLAIM 10). Nishida et al disclose the gas diffusion electrode structure (COL 5, lines 18-22/ COL 1, lines 10-24); and the electrolyte membrane assembly (COL 1, lines 32-35).

Nishida et al also disclose that each of the separators plates is composed of a metal and a conductive coat which has resistance to oxidation and covers a surface of the metal (CLAIM 10); wherein said conductive coat is selected from the group consisting of carbonaceous coat (CLAIM 10) wherein said conductive coat is a metal-plated coat containing particles of a water repellent material (CLAIM 11/ EXAMPLE 7). In particular, EXAMPLE 7 shows the use of the water repellant material (EXAMPLE 7).

In addition, EXAMPLE 10 illustrates the use of a glassy carbon layer material wherein the average particle diameter of the carbon powder is 30 μm (COL 16, lines 15-30/ EXAMPLE 10). Particularly, it is disclosed that the glassy carbon powder is coated on the stainless steel separator plate, wherein glassy carbon particles 8 are fixed to an organic binder 7, and pierce an oxide coat layer 3 (COL 16, lines 45-55/EXAMPLE 10). *Thus, Nishida et al immediately envisages separator plates comprising a metal substrate and including a conductive resin layer comprising a resin having at least one of water-repellant and the electroconductive vitreous carbon powder having the specific mean particle diameter. It is noted that glassy carbon is also called vitreous carbon.*

Figure 10 below depicts the metal base 2, the oxide coat layer 3, the organic binder 7 and the glassy carbon particles 8:



Examiner's note: *With respect to the specific surface area of the vitreous carbon powder, it is asserted that having shown that the prior art employs glassy carbon having a particle size of 30 μm, and assuming arguendo that applicants' correlation between the particle size and the specific surface area is correct and accurate (refer to the amendment of 11/17/04 at page 4, 2nd and 3rd full paragraphs and the table contained therebetween), consequently, the glassy carbon of the prior art must exhibit a specific surface area of approximately 0.15 m^2/g. Therefore, the above-mentioned characteristic, property and/or function is thus inherent as the carbon composition material (i.e. the glassy (vitreous) carbon) recited in the reference is substantially identical to that of the claims and has also a particle size within the claimed range, and therefore, claimed properties, characteristics or functions are presumed to be inherent (**MPEP 2112. Requirements of Rejection Based on Inherency**). Thus, the vitreous carbon of prior art seems to be identical except that the prior art is silent as to an inherent function, property and/or characteristic. In that, it is noted that the extrinsic evidence (including applicants' particle size-to-specific surface area correlation) makes clear that the missing descriptive matter is necessarily present in the glassy carbon described in the reference, and that it would be so recognized by persons of ordinary skill. Accordingly, products of identical*

chemical composition or characteristics cannot have mutually exclusive properties, and thus, the claimed property of the vitreous carbon powder having the specific surface area, is necessarily present in the prior art material.

With respect to claim 4:

Nishida et al disclose an additional layer which is a passive state coat made from chrome oxide (COL 14, lines 56-67). *It is noted that chrome oxide is a Cr-containing material.*

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al 6660419 as applied to claim 1 above, and further in view of the Japanese publication JP 11-126620.

Nishida et al is applied, argued and incorporated herein for the reasons above. However, does not expressly disclose the specific layer material including the entire set of compounds encompassed by the Markush recitation.

Note: for purpose of prosecution, the transitional claim language "having" in claim 4 has been interpreted as open-end language.

As to claim 4:

The JP'620 publication teaches a separator for a fuel cell constituting a solid polymer type fuel cell comprising a material made by applying a coating layer composed of Sn or WC on a surface the separator material (ABSTRACT).

In view of the above, it would have been obvious to one skilled in the art at the time the invention was made to make the separator layer of Nishida et al by having the specific layer material of the JP'620 publication as the JP'620 publication teaches that by applying a coating layer composed of the disclosed specific layer material the separator surface exhibits excellent corrosion resistance characteristics. In addition, the coating layer is high in electroconductivity and thus, current collecting performance is prevented from lowering.

Response to Amendment

5. Applicant's arguments with respect to claims 1 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond Alejandro
Primary Examiner
Art Unit 1745